FY 2015 Superior Accomplishment Award: Paul Peronard - $3150

Bridger Pipeline Oil Spill
Red River Supply Warehouse
Emancipation Mine

The Emergency Response Unit has had a particularly challenging year (and it's not even ¾ done) including several large and unique hazwaste emergency response actions, two significant oil spills of Bakken Crude, and completion of several long-term preparedness strategy documents. Paul Peronard's contributions were vital to the successful completion of three of these responses, as detailed below.

Bridger Pipeline Oil Spill: In mid-January 2015, Bridger personnel confirmed that approximately 13,000 to 50,000 gallons of Bakken Crude oil had been released from the Poplar pipeline which crosses the Yellowstone River approximately 7 miles upstream of Glendive, Montana. Media attention, both local and national, was almost immediate and overwhelming due to the 2011 Exxon spill of 42,000 gallons into the Yellowstone River near Billings, Montana.

The Bridger Pipeline Oil Spill presented a number of unique challenges which the EPA Response Team, led by OSC Paul Peronard, had to overcome. Sub-zero weather conditions had iced over the Yellowstone River for approximately 60 miles of the spill making it difficult to impossible to see where the oil was located. The same ice cover required a different recovery approach than the typical deployment of boom to direct and capture the floating oil. While more common in Canada, cutting slots in the ice with plywood boards inserted to pool the oil was a unique oil recovery technique in the US. The instability of the ice on the fast-moving Yellowstone presented yet another health and safety issue to deal with, each responder requiring tethering to the airboat. The unexpected contamination of a drinking water treatment system, despite the intake being 14 feet below the river's surface presented another quandary, a result of the unique characteristics of Bakken Crude. The Bridger Pipeline Team was able to overcome all of these unique obstacles resulting in the successful protection of the environment, ensuring the safety of downstream water supplies, and reflecting positively on EPA.

Paul Peronard entered into Unified Command with Bridger Pipeline, Dawson County, Montana state agencies, Department of Transportation, and US Fish and Wildlife Service as supporting agencies. Paul immediately developed incident objectives for the spill and began collecting information about the river conditions, ice thickness, and the presence/absence of sheen or recoverable oil. Because the river was substantially iced over, it was difficult to determine where the oil was and how far it had traveled. Cities with water intakes downriver of the spill (Glendive and Sidney, Montana, and Williston, North Dakota) were notified of the spill and advised to monitor their water intakes. Recognizing the magnitude and complexities of the response efforts to address the spill as well as the overwhelming media attention, Paul requested two additional OSCs as well as a Public Information Officer (PIO). The phone duty OSC transitioned to a field liaison and coordinated field operations with the Region 8 office and ensured technical support capabilities were available to Paul and his team.

Under Paul's direction, the Bridger team undertook a number of simultaneous priorities including: Drinking water decontamination and bottled water supply operations; Recovery of oil remaining in the pipeline to prevent further release into the Yellowstone; Oil spill containment and recovery operations; Environmental impact assessment and clean-up operations; Notifications to and coordination with the public, downstream cities, elected officials, and media.

Bottled drinking water was made available to the Glendive residents and a Mobile Analytical Laboratory was brought to Glendive, MT to provide for quicker turnaround on the drinking water

samples. The Glendive treatment system was decontaminated, the distribution system flushed and guidance developed for individual municipal system users to flush their home/business systems. The pipeline breach was found and ice slotting operations to recover oil were implemented between the spill site and Glendive. Where visible, crews accessed pockets of trapped oil by drilling through the ice. Environmental sampling and surveys of endangered species impacts were conducted.

Paul coordinated the various media and elected officials' interest in the spill, participating in 4-5 media interviews each day as well as various unscheduled drop-by visits. Paul presented the difficulties encountered at the site and provided an understanding of the challenges both to oil recovery and keeping employees safe while conducting recovery efforts. Despite the heroic attempts by crews in sub-zero temperatures to recover oil, Paul was realistic about the amount of oil that could actually be recovered. His honesty engendered a level of trust and respect with the community, elected officials, and the media.

The Bridger Pipeline team encountered a significant number of firsts on this spill and, though there were some pitfalls, demonstrated outstanding excellence in leading a successful outcome for this response. Bakken crude has been in headlines for the past several years due to train derailments in which the crude ignites and burns for several days. At the Bridger spill, the ice cover prevented this type of behavior and, instead, appears to have entrained the crude oil into the water column such that it reached a water intake 14 feet below the river surface.

Decontamination of a water treatment plant containing spill contaminants was another first for the Bridger team. The team was able to accomplish this daunting task in only 4 days. The deployment of EPA's Mobile Analytical Laboratory was another successful first and is being considered for future response needs. Transitioning an OSC to a dedicated field liaison was also a new model for the EOC operations and will be incorporated into significant/major regional responses in the future.

Ultimately, only 2,520 gallons of the spilled oil was recovered. However, due to the ice cover, very little reached the shoreline before weathering and diluting into the combined Yellowstone and Missouri Rivers. No impacts to any of the nearby Threatened and Endangered species (Pallid Sturgeon, Interior Least Tern, Piping Plover, Greater Sage Grouse and the Northern Long-eared Bat) were observed. Because of EPA's successful completion of the response phase of the oil spill, due in no small part to Paul's masterful handling of the media and the technical aspects of the spill response, the State of Montana and Bridger Pipeline have assumed the "post-melt operations" for residual impacts.

Red River Supply Warehouse Fire: Additionally, Paul responded to an intense chemical fire at an oil and gas industry warehouse producing a large smoke plume in Williston, ND. Paul had monitoring stations set up to ensure that the nearby community would be safe from potential volatiles as well as particulate matter, which would be the greatest concern for residents approximately one-half mile away. The blaze was so large and so hot, involving significant quantities of chemicals, the city fire department abandoned attempts to extinguish the fire which had required large amounts of water and reduced their efforts using only enough water for suppression. The city issued an advisory to the citizens of Williston to evacuate or shelter in place.

While the local fire department controlled and prevented the fire from spreading to other buildings, Paul recognized that the water used to control the fire could be potentially contaminated and impact the nearby Missouri River. Paul had storm drains covered, site run-off water was diverted from entering the city stormwater system, culverts to the main drainage canal were plugged, and water entering the canal from the north was diverted until the water could be tested. Several locations along the canal were boomed to contain debris, oil, and soot from the fire. A clay berm was also being constructed around the

perimeter of the site to minimize and contain runoff from rain events.

Unfortunately, a heavy rain event on the second evening caused the stored water in the storm canal to over-top, resulting in a fish kill in the canal. Paul coordinated with US Fish and Wildlife personnel who determined that the chemicals in the water had depleted the dissolved oxygen resulting in the fish kills. Paul immediately ordered the installation of aerators and pumps to raise the dissolved oxygen levels which also stripped the contaminants from the water. Within one day of these efforts, the oxygen levels had increased three-fold.

Once the site was released for clean-up operations, Paul oversaw removal of the burned and damaged buildings and debris for recycling or disposal and excavation of the top 18-inches of soil. Due to Paul's foresightedness, more than 250,000 gallons of contaminated water were contained on-site in frac tanks, preventing impacts to the Little Muddy and Missouri Rivers and nearby residents.

Emancipation Mine: Paul was also a key driver for the conduct of the Emancipation Mine in Boulder, Colorado. During the 2013 floods, Fourmile Creek was diverted directly into an historic mine waste pile and presented on-going contamination of a drinking water source for several hundred downstream residents. Paul contributed to the development of a strategy to stabilize the mine tailings while the stream was at low flow conditions (fall and winter months) and, thereby, eliminate any additional erosion that would occur during spring snowmelt. The OSCs initiated removal of the mine tailings in the face of funding and weather uncertainties, and with several directives from the community and Boulder County.

Because nearby residents had experienced increased road traffic due to the 2013 flood rebuilding efforts, a traffic control program and safety measures were developed to ensure the public, including bicyclists, would be safe from the large trucks on the narrow road. To assuage Boulder County's concerns, Martin's team took extra measures to eliminate erosion including erosion controls for snow and wind impacts, dust suppression, and wetting the road. The OSCs also set aside any potential historic artifacts for assessment by Boulder County and a local historian. Lastly, the OSCs coordinated with Boulder Despite some bitter cold temperatures, excavation of the entire tailings pile and final stream alignment/ restoration was completed during the 2014-15 winter months – thus avoiding demob/remobilization costs. This was fortuitous because, with our recent May rains, the creek has once again flooded though, this time, none of the tailings pile remained to be washed away. Because of the realignment and terracing of the creek, the flooding resulted in overflows into the designated areas – exactly as designed. The Emancipation Mine site also served as a unique opportunity for the OSCSs to initiate our newest OSC-in-training, Joni Sandoval, to actual response work in the field.

High Value/Broad Application: Superior contribution to the Agency, other organizations, and industry at the national level with an extended impact on the program.